

ISSUES, IDEAS
AND
INFORMATION
FOR PSYCHOLOGY
STUDENTS

NO. 7 - ETHICS IN
RESEARCH

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CONTENTS

	Page Number
1. Arguments Against the Use of Animals in Psychological Experiments: Primates, Rodents, and Octopuses	4
2. Psychology Debate: This House Believes that Laboratory Experiments on Non-Human Animals Tell Us Little About Human Behaviour	17
3. Ethical Issues and Psychology	19
4. In the Name of Psychology	28
5. Ethics of Stanford Prison Simulation	35
6. To Tell or Not to Tell Participants: The Use of Complicated Scenarios in Experiments	38
7. Did An Unethical Psychology Experiment Cause the Unabomber?	42
8. Telling Participants Unpleasant False Information: The "Ordinariness of Exploitation" - Bramel (1962)	45
9. Three Implications of the Use of Deception in Social Psychology Experiments	51

1. ARGUMENTS AGAINST THE USE OF ANIMALS IN PSYCHOLOGICAL EXPERIMENTS: PRIMATES, RODENTS, AND OCTOPUSES

- 1.1. Introduction
- 1.2. Attitudes towards animals
- 1.3. Primates
 - 1.3.1. A classic example: Riesen and visual perception
- 1.4. Rats and mice
 - 1.4.1. Example of studying "pain-related empathy"
- 1.5. Animals kept in unnatural environments
- 1.6. Alternatives to animal experiments
- 1.7. References

1.1. INTRODUCTION

Peter Singer (1975) was clear in his view about "the tyranny of human over non-human animals" - it "can only be compared with that which resulted from the centuries of tyranny by White humans over Black humans. The struggle against this tyranny is a struggle as important as any of the moral and social issues that have been fought in recent years" (quoted in Cardwell 1997 p2).

The debate over the use of animals in research generally is heated as well in psychology. For example, Bowd (1980) argued that much animal research is never published because it deals with problems that have "self-evident" answers. While Bowd and Shapiro (1993) felt that a "sanitised and misleading" picture is presented by advocates who are "immune" to the suffering of animals (Russell 1992).

On the other side, Miller (1985) pointed out that intensive farming is a lot worse than animal experiments in psychology. Rozin et al (1997) has talked of the "moralisation" of the issue, where neutral objects acquire moral components (ie: emotional not rational decisions are made).

In a number of cases, the debate over the use of animals in research generally has become more than just a debate because of the threats and attacks from violent "animal rights activists". Leading to this scenario, for example, in Germany where research is carried out on the neural activity of monkeys:

In a building surrounded by chain-link fence topped with razor wire, neuroscientist Andreas Kreiter conducts his experiments

in an atmosphere more akin to that of a top-secret weapons lab than a university research institute (Koenig 1999 p1604).

Partly in consequence of such situations, groups have been set up to bring together different opinions in dialogue rather than violence. For example, the European Centre for the Validation of Alternative Methods (ECVAM) was created by the European Union while the Boyd Group is an initiative by Colin Blakemore (neuroscientist) and Les Ward (animal welfare activist) (Koenig 1999).

The main arguments against the use of animals in psychological research can be summarised as the following:

1. The morality of inflicting pain and suffering on animals.
2. Animals are not the same as humans (for example, in physiology), so any findings from animal experiments are of limited use to understanding human behaviour.
3. Much of the research with animals does not tell us anything useful.
4. There are better alternatives.
5. It can be more expensive than using human volunteers because of housing costs etc for the animals.
6. We can learn from animal studies, but the findings are not applicable because the animals are kept and tested in unnatural environments.
7. Benefits as humans for not experimenting on animals. In arguing for the humane treatment of octopuses, Mather and Anderson (2007) concluded that "if we hold these animals in high regard and respect their existence, caring about them enriches our own lives as well as theirs" (p127).
8. From a moral philosophy point of view, just because a species is different to us does not mean there is no moral difference in experimenting on them compared to humans (Baggini 2006).

1.2. ATTITUDES TOWARDS ANIMALS

Mather and Anderson (2007) pointed out that "Human attitudes towards and values placed on animals are both varied and differential, depending on the animal

evaluated.. (and) that animals judged to be more cognitively competent and those we could potentially bond with were presumed to be worth more consideration" (p119).

Mather and Anderson (2007) divided the philosophical bases of attitudes about animals into three groups:

i) Contractarian/Kantian view that "animals were no better than automata and we ought not to consider their worth at all". This is a view which tends not to be popular today;

ii) Utilitarian view that balances actions and consequences, costs and benefits (ie: "losses in terms of pain caused to the animals would be outweighed by our gains");

iii) Rights-based view which is quite popular now, and gives animal rights (including "bodily integrity and bodily liberty") based in part of their level of awareness.

The latter two views are linked to an assessment of whether the animal is suffering and/or to what degree. It could be asked whether a certain species feel pain, or more precisely, "How and to what extent and in response to what stimuli" (Mather and Anderson 2007).

If the level of suffering is one criterion for assessing the rights and wrongs of animals experiments, another criterion is to see animals as individuals based upon their ability to learn.

Mather and Anderson (2007) applied this criterion to octopuses. They learn from the consequences of previous behaviour and specialist brain regions aid this process. They show many parallels to mammals, while, at the same time, they are not "lab rats" and do poorly on some stimulus-response experiments (eg: choose correct stimuli for reward).

There is another criterion that can be used to assess the "worthiness" of animals, and that is self-awareness. This is often tested with the "mirror test" (Gallup et al 2002), where individual animals are presented with a mirror to see if they recognise themselves or perceive a different animal. Primates use the mirror to explore their body, while animals that "fail" the test produce aggressive reactions as towards an intruder/rival.

Table 1.1 summarises how octopuses fare on the criteria of suffering, learning, and self-awareness (Mather and Anderson 2007).

CRITERION	POSITIVE FINDINGS	NEGATIVE FINDINGS
Suffering	Universal physiological	Cannot tell if pain
Learning	Learning based on exploration and spatial	Poorer than rats on learning correct
Self-awareness	Monitoring of distance travelled from home suggests awareness of position in space, and use of deceptive	Reacted to mirror as if another octopus by changing skin colour

Table 1.1 - Assessment of octopuses on criteria of suffering, learning, and self-awareness.

1.3. PRIMATES

Langley (2006) summarised her concerns:

The key issue with experimentation on primates, as for all animals, is the capacity to suffer. If an animal does not consciously experience pain, for example because it lacks the faculties to generate the feelings of suffering and distress (ie: it is not sentient), then we need not be concerned about causing individual harm (although there may be other concerns)(p14).

Concern about research with primates is often greater than with other animals because apes share many abilities in common with humans including aspects of consciousness and self-consciousness (Langley 2006). Jane Goodall noted many of the similarities between chimpanzees and humans from her observation work in Africa, and she concluded that:

In view of these physiological and anatomical similarities, it is sad to find that the equally striking similarities between ourselves and these apes in the sphere of behaviour, emotional expression and intellectual performance have been largely disregarded or even denied by many of the researchers who use the living bodies of chimpanzees in their laboratories (Goodall 1995 quoted in Langley 2006).

Feeling that primates experience pain as we do can be seen as the ultimate sin. Cognitive psychologist, Gary Marcus admitted: "I think it's pretty hard not to anthropomorphise chimps.. Our brains are set up to

analyse other entities in terms of their goals, beliefs, desires and so forth, and chimps look for all the world like they've got those things" (Pilcher 2005 p22).

That primates (and vertebrate animals) are sentient, defined as "an ability to experience pleasure and suffering", was written into EU law in 1997 (Langley 2006). So the issue in many cases is not denying that animals experience pain and suffering, but it becomes the argument that the potential benefits of animal experiments for humans justifies the suffering. However, this argument has limited validity with psychological research where the knowledge gained from animal research is not really linked to benefits for humans. In the case of Riesen's work (see section 1.3.1 later), are there any benefits, let alone to humans?

Supporters of animal research may argue that specific research may not appear to have direct human benefits, but it is part of the general body of knowledge which at a later date will bring benefits. It is a small step along an unknown path and the destination will be clearer in the future. This type of research is sometimes called fundamental or open-ended research. It could be argued that research on the nature of visual perception is one such research, and so Riesen's work has helped subsequent researchers ¹.

Some psychological research with animals can be said to have medical benefits as in the case of mental disorders. For example, marmosets have serotonin and dopamine areas of the frontal cortex damaged by neurotoxins to simulate possible problems in schizophrenia (eg: Clarke et al 2005). After up to twenty neurotoxin injections, the marmosets learn visual discrimination tasks on a computer screen for many hours a day (Langley 2006).

Surely, more can be learnt about the cognitive changes during schizophrenia by testing human volunteers with schizophrenia, and there are such studies (eg: Lopez-Figueroa et al 2004). Small monkeys tested for twenty-two hours a day, five days a week have limited applicability for understanding human behaviour. Specifically, chemically damaged brains do not match brains damaged by illness:

Extremely complex interactions underlie functions such as thought, memory, perception and learning; and there is built-in redundancy so that, when one part of the brain is damaged, another area may take

¹ Riesen (1947) cited by 102 articles (<http://scholar.google.co.uk> accessed 05/06/09).

over some of the functions (Langley 2006 p94).

It may be that animals are not useful to study anyway. Perel et al (2007) found similar outcomes between animal studies and human clinical trials for three medical interventions, but not for three others.

In 2005, the draft sequence of the chimpanzee genome was published. Gagneux et al (2005) asked whether this would mean more or less research on them. More research with the interest in the possibility of transgenic chimpanzees (genetically modified), or less research as the differences to humans are seen. Whatever happens, they argued that research on apes needed to be in the context of conservation of dwindling wild populations.

The most positive view towards primates is the "Declaration on Great Apes" (1993) which stated that: "We demand the extension of the community of equals to include all great apes: human beings, chimpanzees, gorillas and orang-utans" (quoted in Check 2005).

1.3.1. A Classic Example: Riesen and Visual Perception

Riesen (1947) reared two chimpanzees (one male and one female) in darkness for the first few months of their lives. There were half a dozen brief (45-second) daily episodes of light to allow routine care of the animals. This totalled no more than forty hours of light. At 21 months old, the female was put permanently into light. The animals were 26 months old at the time of writing.

Riesen was interested in the study of "innate visual organisation in man", and to resolve the contradictions in findings from humans born blind who gained their sight, and experiments with lower mammals.

After being raised in darkness, the chimpanzees' visual abilities were tested in different ways. Some abilities appeared normal and others were abnormal (table 1.2).

Riesen was sure that the results were not due to lack of motivation by the animals because "sufficient hunger to produce whimpering, and shock severe enough to bring vocal protests, did not alter the fact of failure to 'see'" (p108).

In terms of visual abilities, he concluded: "The prompt visual learning so characteristic of the normal adult primate is thus not an innate capacity, independent of visual experience, but requires a long apprenticeship in the use of the eyes" (p108).

NORMAL ABILITIES	ABNORMAL ABILITIES
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<ul style="list-style-type: none"> • Changes in light intensity produced pupillary responses • Sudden illumination produced a startle reaction, and then turning of the eyes towards the light • The eyes followed a moving light in a darkroom • Eye movements in response to a rotating black and white striped drum 	<ul style="list-style-type: none"> • The eyes did not fixate/focus on an object still or moving • No eye blink as an object brought rapidly towards the eyes, though this did develop in the female chimpanzee • Initially no visual recognition of objects, like the feeding bottle, which were recognised by touch • Reaching for the bottle appeared on the 16th day of light for the female, and much later for the male who was still kept in darkness. Normally reared animals have this ability by 12 months old. • Learning to avoid an object that gave an electric shock was "an extremely slow and
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Table 1.2 – Normal and abnormal visual abilities of the two chimpanzees.

The chimpanzees needed fifty hours of exposure to light before visual abilities fully developed. Previous work by other researchers had found that rats reared in darkness were "visually normal" within two hours of exposure to light (Riesen 1947).

The conclusions of the research were challenged by the criticism that rearing in darkness had inhibited the development of the retina (Weiskrantz 1956).

In response, Riesen (1965) performed another experiment with three more chimpanzees from birth to seven months old. One chimpanzee spent the whole period in darkness as in the previous experiment, and was found to have retinal damage at the end of the study. A second chimpanzee was raised in normal lighting conditions.

The final chimpanzee was raised in darkness except for 1.5 hours each day when wearing specially-designed goggles unpatterned light was permitted. This stopped the retinal damage, but did not allow the chimpanzee to see objects and shapes. When tested this chimpanzee showed poor visual abilities.

So, overall, Riesen's work showed that normal visual development required the chimpanzees to see objects (ie: to learn what things look like). Visual perception is not wholly innate.

1.4. RATS AND MICE

Rats and mice have been studied in vast numbers by researchers from all fields. Most recently, genetically modified mice have become the focus, particularly in the biomedical sciences (which overlaps with areas of psychology).

Individuals respond differently to drug treatments, and the basis of these differences is genetic. This has led to the development of pharmacogenetics or pharmacogenomics, which searches for the genetic differences to drug effectiveness and adverse reactions (Liggett 2004).

The molecular and cellular basis of the genetic and drug differences is required, and, Liggett (2004) argued, that genetically modified animals, specifically mice ("knockout mice" or "humanised mice") are the answer. Genetically modified animals have human DNA sequences.

There are advantages of using these mice over human and *in vitro* (tissue culture) studies (table 1.3).

HUMAN STUDIES	IN VITRO STUDIES
<ul style="list-style-type: none"> Require large number of participants to test all genetic differences. Difficult to ascertain molecular basis of effects. Ethical issues related to studying humans. 	<ul style="list-style-type: none"> Studying cells in isolation misses interaction between them in body. Cannot test for influence of environment on cells in isolation. The problems of getting relevant (infected) cells,

Table 1.3 - Disadvantages of human and *in vitro* studies of the effects of drug treatments.

But mice are not humans, and there are physiological differences at the cellular level between them. Possibly more worrying is that chimpanzees have been demonstrated to predict human metabolism of drugs (pharmacokinetics) best of all (VandeBerg et al 2005).

Mice can be genetically modified in different ways (figure 1.1):

i) Destruction of mouse gene in embryo to see the effect. The assumption is that the difference compared to healthy mice must show the role of the missing gene. This is not necessarily comparable to humans, and the gene destruction may have multiple effects, including lethal consequences (ie: the animal dies).

ii) Replacement of one of the pair of mouse genes with a human gene. Every gene position has two genes (one from the biological mother and one from the biological

father). Either the mother's or father's copy can be removed. This also shows the different effect of a copy of a gene depending on the biological parent.

iii) Replacement of both copies of the gene with human ones.

GENE FROM:	MOTHER	FATHER
Destruction of mouse gene	0	0
Replacement with one human gene	M	H
Replacement with two human genes	H	H

0 = no gene; M = mouse gene; H = human gene

Figure 1.1 - Different ways of genetically modifying mice.

1.4.1. Example of Studying "Pain-related Empathy"

Langford et al (2006) found that mice showed a rudimentary form of empathy (ie: a response to the suffering of another). Solitary mice had a weak acetic acid solution injected into the stomach. This produced a stereotyped pain response (writhing behaviour) which was timed. In another condition, two mice who had lived together for at least a week were both injected, and the writhing behaviour lasted longer. This was not the case in a condition with two unfamiliar mice.

In another experiment, Langford et al (2006) injected formalin into mice's paws which caused them to lick the area (this was measured). Each individual of a pair of mice injected with high or low doses spent the same time licking. But when one of the pair was given a low dose and the other a high dose, the former licked longer and the latter licked for less time.

In a variation, the researchers measured the time it took mice to withdraw their feet from a hot spot on the cage floor. It was quicker if a cage-mate was writhing from the acetic acid injection, even though the foot withdrawing mice had not had an injection themselves. This ruled out imitation which could have occurred in the previous experiments.

There is a question as to whether these behaviours were empathy. It is better to describe them as "social contagion" ("a primitive kind of empathy") which does not involve an understanding of how the other is feeling; eg: when one human baby cries, so do the others in the

vicinity that hear it (Miller 2006).

Similar has already been done with humans. Singer et al (2004) investigated "pain-related empathy" among sixteen couples. The female partner was given a functional magnetic resonance imaging (fMRI) scan while she or her partner received painful stimulation to the back of the right hand through an electrode. The women could see the partner, who was seated in the same room, via a mirror in the scanner. Particular areas of the brain were activated for own and loved one's pain. The empathy of pain was not identical to experienced pain, but it was similar. Furthermore, participants were able to rate their subjective experience of empathy, which correlated with certain brain activity. This is clearly not possible when studying animals.

1.5. ANIMALS KEPT IN UNNATURAL ENVIRONMENTS

Rats are used in many psychological-based studies. Würbel (2001) argued that the housing conditions of rats produced alterations in brain structure and function which compromised the utility of such animals. This occurs in three ways:

i) Early environmental deprivation - rats are often kept in sparse environments, and this will influence the brain development. Rosenzweig and Bennett (1996) showed that the number of neurons varied in the brains of rats in enriched and deprived environments, which affected learning and memory.

ii) Thwarting of instinctive responses - instinctive behaviour, like digging, can be thwarted in a laboratory cage without soil, for example. But the behaviour persists and continues to be repeated. This is a stereotyped behaviour, and if it cannot be performed appropriately produces stress, and even changes in the brain (eg: basal ganglia).

iii) Habitat-dependent adaptation process - It has been found that maternal care behaviour (like the amount of licking of pups) varies depending on the environment. In the wild where the environment is stressful, maternal behaviour prepares the pups for survival in such an environment. However, in laboratory conditions, such behaviour by the mother is maladaptive because the future environment of the pups as research subjects will be quite different. In other words, "the safety and stability of the rearing environment does not predict the

future challenges involved in life as an experimental animal" (Würbel 2001 p209).

The above "increases the risk of obtaining results that are idiosyncratic to a particular situation" (Würbel 2001 p210).

Laboratory animals are stressed by handling, blood collection, and force-feeding according to a review of eighty scientific publications (Balcombe et al 2004).

Burman et al (2008) have also shown that rats housed in deprived laboratory conditions show abnormal behaviour. In this experiment, rats were reared in enriched environments, and then half had the stimulating objects removed to produce a negative affect. It has been noted that negative affect (eg: depression in humans) produces a greater sensitivity to losses. In this experiment, the size of the food reward for running down a runway was unexpectedly decreased from 12 pellets to one pellet (known as the "successive negative contrast" technique).

After the reduction in reward, the rats from environments where stimulating objects removed took significantly longer to cross the runway (from less than 5 seconds to nearly twenty seconds). After five days of one pellet reward, their speed did increase, but not to the original rate.

These changes in animal behaviour are confounding variables on their use in experiments. For example, is learning due to the experimental variables or these confounding behaviours?

1.6. ALTERNATIVES TO ANIMAL EXPERIMENTS

The "Three Rs" concept of replace, reduce, and refine animal experiments (table 1.4) was developed to eventually stop research on animals in science and medicine (Langley et al 2007).

REPLACE	REDUCE	REFINE
eg: Use human volunteers	Some research not necessary because it does not tell anything useful	Where animals are used, design experiments that do not involve inflicting pain and

Table 1.4 - The "Three Rs".

One example that comes from the "Three Rs", and is applicable to psychology, is the use of transcranial magnetic stimulation (TMS) with human volunteers instead of brain damage experiments with animals. TMS which

applies a strong magnetic field to the head can temporarily, safely, disrupt neural activity (Barker et al 1985). "TMS has opened the door to a wide range of human brain studies without the complications of species variations" (Langley et al 2007 p921).

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2. PSYCHOLOGY DEBATE: THIS HOUSE BELIEVES THAT LABORATORY EXPERIMENTS ON NON-HUMAN ANIMALS TELL US LITTLE ABOUT HUMAN BEHAVIOUR

FOR

1. A large number of psychology experiments in laboratories with non-human animals use rats and mice (between half to three-quarters). These animals are very different to humans both in their behaviour and their physiology. For example, the cerebral cortex is so much smaller relative to the size of the whole brain.

In fact, other mammals vary between themselves. In a famous example from the 1960s, Fisher injected the same neurotransmitter into the same area of the brain in cats and rats, and got different reactions.

2. Non-human animals are not able to tell us how they feel, so the researcher can only guess from the animal's behaviour. Language is also a key difference in mediating thought in humans (as well as culture).

3. A moral argument against the use of non-human animals in experiments is summed up by Australian philosopher, Peter Singer: "Either the animal is not like us, in which case there is no reason for performing the experiment; or else the animal is like us, in which case we ought not to perform an experiment on the animal which would be considered outrageous if performed on one of us".

Singer coined the phrase "speciesism" to mean favouring one's own species over another, and he argued that animals have rights.

4. Many laboratory experiments are inflicting pain and suffering, not necessarily for good reason. Peter Singer, again, sees most studies in science using non-human animals as "trivial and unpleasant".

5. Laboratory experiments are unreal environments. If there are benefits to studying non-human animals, it must be done through research in their natural habitat.

AGAINST

1. Human beings are animals in the evolutionary sense, and so a lot can be learnt from other species. At a

physiological level, mammalian brains are built in the same way (ie neurons and synapses). Thus non-human animals display simple behaviour which can tell us about complex behaviour.

It is an untenable position to argue that human beings are absolutely unique among animals species.

2. Non-human animals can be used in experiments which would not be acceptable with humans. A lot of recent research is able to genetically engineer mice to see the effects of a genetic mutation. Deliberate genetic mutation for experimental purposes is seen as morally unacceptable in humans.

Psychological research would be highly limited were there no study of non-human animals.

3. Many species have short lifespans, and so it is possible to observe the behaviour throughout their lives and into future generations. This is so much quicker than following human behaviour for decades.

It is also easier to study small animals, for example, in scientific rigorous ways.

4. There are direct benefits to humans from experiments on non-human animals. These include the testing of new drugs for mental illness. Drug companies try many drug compounds before they are tested on humans, and the use of non-human animals saves time, particularly for compounds that do not work.

Jeffrey Gray argued against the accusation of speciesism by saying that "we owe a special duty to members of our own species".

5. Studying non-human animals in the laboratory can also tell us about what humans can't and don't do anymore in terms of understanding evolutionary development. Animal models are a vital part of understanding evolution, and the evolutionary basis of human behaviour.

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3. ETHICAL ISSUES AND PSYCHOLOGY

- 3.1. Introduction
- 3.2. BPS (2006): Current guidelines
- 3.3. Reflections on ethical guidelines

3.1. INTRODUCTION

Concern about ethical issues in research in psychology developed in the 1960s onwards.

Because Milgram's obedience studies are often used as the prototypical example of why strong protection of human subjects in research is needed, some researchers, including many psychologists, assume that it was this research that was responsible for the development of stronger federal guidelines [in the USA].... However, not only is such a conclusion wrong, but it suggests an authority and prominence for psychology among the sciences of the 1960s that did not exist. Instead, the federal guidelines on protection of human research subjects that were approved in 1966 came about because of abuses in medical research (Benjamin and Simpson 2009 p15).

In Britain, in recent years, the British Psychological Society (BPS) "Code of Conduct Ethical Principles and Guidelines" (1991) formed the basis of how to treat human participants during research until the current revamped set (BPS 2006). This was a revision of the original "Ethical Principles for Research with Human Subjects" (BPS 1978). The 1991 guidelines were meant to cover more than just research, but also practising psychologists as well. The guidelines were intended to apply at all levels of psychology: from the school or college student doing research for their coursework through to the Professor of a Psychology Department at a university. In the USA, there are similar guidelines produced by the American Psychological Association (eg: APA 2002).

The general principle established by the ethical guidelines is that any researcher in psychology must consider the ethical implications and psychological consequences of the research upon the participants. It also requires that psychologists are aware of their colleagues work, and whether the ethical guidelines are being flaunted. The key terms are "integrity" and "respect for the person".

3.2. BPS (2006): CURRENT GUIDELINES

The "Canadian Code of Ethics for Psychologists" (CPA 2000) influenced the BPS (2006), and was based upon four principles in order: respect for the dignity of persons, responsible caring, integrity in relationships, and responsibility to society.

i) Respect for the dignity of persons - This is "the belief that each person should be treated primarily as a person or an individual in him/herself, not as an object of a means to an end".

The principle includes general respect and rights, non-discrimination, informed consent, freedom of consent, protection of vulnerable persons, privacy, and confidentiality.

ii) Responsible caring - This is summarised as "do no harm", and includes competence of the psychologist, minimising harm, offset/correct harm, and care for animals.

iii) Integrity in relationships - The integrity includes accuracy/honesty, objectivity/lack of bias, straightforwardness/openness, and avoidance of incomplete disclosure.

iv) Responsibility to society - "Psychologists, both in their work and as private citizens, have responsibilities to the societies in which they live and work, such as the neighbourhood or city, and the welfare of all human beings in those societies".

The BPS (2006) asserted the ethical code of conduct based on principles similar to the CPA. The "Code of Ethics and Conduct" is based on the principles of respect, competence, responsibility, and integrity.

1. Respect

"Psychologists value the dignity and worth of all persons, with sensitivity to the dynamics of perceived authority or influence over clients, and with particular regard to people's rights including those of privacy and self-determination" (BPS 2006 p10).

Thus the importance of privacy and confidentiality, informed consent, and self-determination (right to withdraw) in research situations.

Gaining informed consent is always faced with the question of how far to go. How much of the details should be given to the participants before the experiment ever

begins?

Resnick and Schwartz (1973) found by completely informing the participants beforehand, the results appeared opposite to past research findings. Furthermore, informed participants were uninterested in participating in the experiment:

This may suggest that people enjoy an element of risk and nondisclosure and become bored rapidly with the prospect of participating in something about which they already have full knowledge. It is also possible that the reason why there were so few volunteers for the ethical group was that the students felt the whole thing was a joke, as some students indicated, and in their disbelief and levity refused to waste their time.

A third possibility is that people may become very suspicious when the experimenter is so totally disclosing and stay away altogether. Three subjects in the ethical group explicitly stated that they felt they may have been involved in an elaborate double-reverse manipulation (Resnick and Schwartz 1973 p137).

Resnick and Schwartz (1973) compared two groups of students in a simple verbal conditioning experiment where participants had to make a sentence from the words presented. Every time "I" or "we" was chosen, the experimenter reinforced the participant with "good" or "okay". One group was given usual instructions ("non-ethical" condition) and the other was told everything ("ethical" condition)(table 3.1).

As per previous research, the "non-ethical" group produced more sentences containing "I" or "we" after reinforcement, but the "ethical" group did not. A significant difference ($p<0.001$) between the two groups.

Informed consent also occurs in relation to deception. The BPS (2006) code allowed two exceptions for deception:

a) "Withhold information from clients only in exceptional circumstances when necessary to preserve the integrity of research or the efficacy of professional services, or in the public interest and specifically consider any additional safeguards required for the preservation of client welfare" (p13);

b) "Avoid intentional deception unless: (i) deception is necessary in exceptional circumstances to preserve the integrity of research or the efficacy of professional services; (ii) any additional safeguards required for the preservation of client welfare are specifically considered; and (iii) the nature of the deception is disclosed to clients at the earliest feasible opportunity" (p13).

"UNETHICAL" CONDITION

Thank you very much for coming in. Let me tell you what we'll be doing. I'll be showing you some cards, all of which are like this one. [The subject is shown a sample.] Each card has a different verb in the centre and six pronouns underneath. The idea is simply to make up a sentence with that verb, beginning the sentence with one of the pronouns, and completing it with whatever words or thoughts you wish. When you've completed the sentence, I'll show you the next card.

"ETHICAL" CONDITION

There has been much recent controversy in the American Psychological Association and among people who conduct psychological research concerning the ethical standards by which such research should be conducted. My purpose in coming into this classroom is to ask for volunteers to participate in an experiment seeking to investigate the effects of two kinds of ethical standards on the outcome of an experiment in verbal conditioning. I would like to take a minute to explain all aspects of this experiment to you. There are two groups of subjects being run. One group, the one we are asking you to participate in, will be informed totally about the nature of the experiment, including all the hypotheses being investigated.

The hypothesis of this experiment is to determine what effect full disclosure of telling you the hypotheses will have on your behaviour in the experiment, in contrast to the other group, who have been told only that the experiment involves "sentence construction." You will be asked to come into a room where you will be given one hundred 3 x 5 inch cards, one at a time, on each of which is printed six pronouns: I, We, You, They, She, He, and a verb. These pronouns will appear in random order from one card to the next and the instructions that will be given you at that time will be to compose a sentence using the verb that is printed on that particular card, and to begin the sentence with one of the six pronouns. If you begin your sentence with either the pronoun "I" or "We," the experimenter will say "good," or "mmm-hmmm," or "okay." Previous findings using this method have shown that subjects will increase their use of the reinforced pronouns over the 100 trials to a significant degree beyond the level that they were using these pronouns in the initial trials, when the verbal reinforcement was not given.

Having this knowledge, we honestly do not know what you will do with it. The true purpose of the experiment is to investigate, using as the independent variable, the proposed ethical standards for conducting research, versus the standards that are in effect now. The standards that are in effect now state, "The psychologist assumes obligations for the welfare of his research subjects, both animal and human." "The psychologist seriously considers the possibility of harmful after effects and avoids them or removes them as soon as permitted by the design of the experiment." The newly proposed standards are 19 tabloid-size pages long, printed in rather small type. These will be available for anyone who wishes to examine them. We need fourteen subjects to participate in this study, and I would like at this time to pass a sheet around in which you are asked to indicate your name, phone number, and times of availability if you would like to participate. We will also ask you at the end of your participation in the verbal conditioning task whether you were aware or not aware of what the experimenter was trying to do (Resnick and

Table 3.1 - Instructions given in the "ethical" and "non-ethical" conditions.

2. Competence

"Psychologists value the continuing development and maintenance of high standards of competence in their professional work, and the importance of preserving their ability to function optimally within the recognised limits of their knowledge, skill, training, education, and experience" (BPS 2006 p14).

3. Responsibility

"Psychologists value their responsibilities to clients, to the general public, and to the profession and science of Psychology, including the avoidance of harm and the prevention of misuse or abuse of their contributions to society" (BPS 2006 p17).

This principle includes avoiding harm to participants, the use of debriefing after the research, and standards for research involving animals.

4. Integrity

"Psychologists value honesty, accuracy, clarity, and fairness in their interactions with all persons, and seek to promote integrity in all facets of their scientific and professional endeavours" (BPS 2006 p20).

Table 3.2 summarises the principles and the traditional ethical issues for research.

Respect	Privacy; confidentiality; informed consent; right to withdraw
Competence	Not claiming expertise do not have
Responsibility	Avoid harm; debriefing; use of animals
Integrity	Honesty and accuracy

Table 3.2 - Four principles of the BPS (2006) code and traditional ethical issues in research.

3.3. REFLECTIONS ON ETHICAL GUIDELINES

Research in psychology is not neutral:

Just as results of research in atomic physics can be used for the treatment of cancer as well as for destructive weapons, so methods discovered to reduce prejudice toward minority groups, to

eliminate troublesome behavioural problems or to facilitate learning in school may also be used to manipulate political allegiance, to create artificial wants, or to reconcile the victims of social injustice to their fate (American Psychological Association 1982 quoted in Cardwell 1997).

Homan (1991) believed that ethical codes take away personal responsibility, and invite the search for loopholes and ways to "play the system".

1. The "ordinariness of exploitation in experiments

It is not that ethical guidelines are unnecessary for psychologists, but there is a "normality" of "unethical" behaviour. If the guidelines are followed to the letter then experimental research is severely restricted, so certain aspects of experimental manipulation are accepted as permissible. They are commonly used. These can be seen in the recent US experiment by Bramesfeld and Gasper (2008) on mood and information processing:

- i) Student participants were given "partial course credit" for their involvement. How much does this influence the right to non-participation and right to withdrawal? Are the participants fully self-determined in their involvement in the experiment?
- ii) Changing the participants' mood by watching and thinking about a 5-minute clip from a comedy show (induce good mood) or a dramatic film (bad mood). The lasting consequence of the latter could affect the participant.
- iii) No details were found of debriefing including checking that the mood change, particularly the sad mood, was not lasting. It is assumed that this took place.

This is not a particularly unethical experiment, compared to those in the past, but it is typical of the "ordinariness of exploitation" in psychology experiments.

2. Out of step with the real world?

Psychologists' concern for treating the participant with consideration during research can seem out of place when far worse scenarios are played out on television each day. The "acceptability" of set ups that trap people and humiliate them for entertainment can be called a "new cruelty" in popular culture (Gill 2008): A "kind of

nastiness has become widespread on television since the advent of reality shows .. Today, insults and attacks have moved well beyond shows like 'Big Brother' and can be heard routinely in talk shows, makeover programmes and comedies.." (p48).

3. Issue of power

Critical psychologists would raise the issue of power. "The question of who has the power to interpret people's experience applies to all psychological research. It is a political and ethical question because in the process of giving meaning to events and accounts, we evaluate them. Since it is impossible to avoid this process, we need to be careful how we base interpretations on evidence" (Hollway 2007 p22). This is most evident in the case of research with children.

Jensen (2005) explored the idea of a "different kind of adult" during participatory action research with children and computers in Denmark. In participatory action research with children, or adults, "the researcher allies herself with the people that she is interacting with in order to build meaningful and expansive communities" (p168).

The "different kind of adult" approach (Christensen and James 2000) requires the researcher to behave "as a naive participant in the setting at hand, as a visitor from another planet" (Jensen 2005 p169).

Attempting to be alongside children is difficult because adults have authority within society, compared to children, whether they want it or not. Adult researchers can become "enrolled" - aligned with the interests of one group (adults) against another group (children). Because Jensen (2005) was involved in running a "computer club" it was assumed that she was a teacher with all of the pressure to monitor and supervise the children's behaviour. There was uncertainty on the side of the children as well.

Jensen (2005) concluded: "It is not enough to be on the side of the 'little people' - one must take account of the more powerful people surrounding them. By being too different, not only did we jeopardise our own credibility and our chances to continue our work at the school, but also the visible benefits for the children involved" (pp176-177).

Power relations and inequalities permeate society, and are involved in the social construction of appropriate behaviour and roles, including in research.

Just wanting to remove them, as in the BPS (2006) code ², does not remove them.

4. Ethics in the real-world

There are obvious situations where the ethical guidelines are relevant outside the research situation. For example, in August 2007, the American Psychological Association reaffirmed its position against torture, and cruel and inhuman treatment of individuals, but it accepted that its members would be involved in interrogations at US detention centres like Guantanamo Bay. Of concern is that "the psychologists' presence lends legitimacy to these settings and whatever takes place within them" (Adler 2007 p18).

Bloche and Marks (2005) reported that psychologists and psychiatrists have been involved in designing strategies to use extreme stress and behaviour-shaping rewards with detainees at Guantanamo Bay.

Documents requested under the Freedom of Information Act in the USA suggested the use of learned helplessness as an interrogation technique to induce passive behaviour in detainees (Marks and Bloche 2008).

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² "Cultivate an awareness of power structures and tensions within groups or teams" (BPS 2006 p22).

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4. IN THE NAME OF PSYCHOLOGY

- 4.1. Introduction
- 4.2. Electrical stimulation of the brain (ESB)
- 4.3. Manipulating future generations: Eugenics
- 4.4. References

4.1. INTRODUCTION

Ethical treatment of participants in research and patients/clients in treatment and therapy are central today. The psychology associations, like the British Psychological Society, have clear guidelines and codes of conduct.

However, the history of psychology is littered with research and treatments that are unpleasant to say the least. There are well known examples like conditioning experiment with the nine-month-old "Little Albert" (Watson and Rayner 1920)(table 4.1), but here are a selection of lesser known cases. In most cases, they were seen as acceptable, if not laudable, at the time.

BEFORE CONDITIONING - One of the two experimenters caused the child to turn its head and fixate her moving hand; the other, stationed back of the child, struck the steel bar a sharp blow. The child started violently, his breathing was checked and the arms were raised in a characteristic manner.. On the third stimulation the child broke

DURING CONDITIONING - White rat suddenly taken from the basket and presented to Albert. He began to reach for rat with left hand. Just as his hand touched the animal the bar was struck immediately behind his head. He jumped violently and fell forward, burying his face in

AFTER CONDITIONING - The instant the rat was shown, the baby began to cry. Almost instantly he turned sharply to the left, fell over on left side, raised himself on all fours and began to crawl away so rapidly that he was caught with difficulty before reaching the edge

Table 4.1 - Examples of quotes from Watson and Rayner (1920) to show unethical treatment of "Little Albert".

In the early part of the twentieth century, many researchers did as they wanted, and any ideas about the ethical treatment of participants were very limited compared to today. The dominant force was the progress of scientific knowledge rather than the participants' well-being.

For example, Berkun et al (1962), working for the US Army Leadership Human Research Unit, were interested in

how individuals responded in extremely stressful situations, and so they created such situations to see what would happen. In one experiment, soldiers on a plane were led to believe that it was going to crash into the sea. As the plane fell downwards, the soldiers were asked to fill out insurance forms (which were actually tests of mental ability). After doing this, the plane pulled up and the experiment was made known. Not surprisingly, the soldiers made more mistakes on the forms than a control group who had filled out the form on the ground.

In a classic example of the "screw you effect" (Masling 1966), where participants try to disrupt the research, one soldier wrote a warning message on a airsick bag for future soldiers in the experiment (Boese 2007).

In another experiment, Berkun et al told soldiers that a sudden emergency had arisen (eg: accidental nuclear radiation) while they were in a desolate area with a radio "which has quite suddenly failed" (quoted in Kelman 1967). In yet another scenario, participants were led to believe that they were responsible for an explosion that seriously injured another soldier.

Similarly unpleasant, Campbell et al (1964) gave their five male volunteer alcoholic patients a drug ("Scoline") that interrupted breathing. The researchers pointed out that "This has no permanent harmful physical consequences but is nonetheless a severe stress which is not in itself painful.." (p628; quoted in Kelman 1967 p4). In short, the participants believed that they were dying. No warning of this effect was given beforehand because that would have reduced the traumatic impact, argued the authors. The participants had volunteered because they believed the research was connected with a possible therapy for alcoholism.

The reality of the unpleasantness of the experience was summed up by one participant: "One subject made this comparison: he had been a rear-gunner in a Stirling bomber which had flown, during one operation, straight and level for 5,000 yards on a radar beam over Düsseldorf; he rated the Scoline trial as the more traumatic experience of the two" (pp631-632).

Distressing in a different way, Mulder and Stemerding (1963) performed a field experiment on group dynamics and the reaction to threat with independent food merchants in a number of Dutch towns. The group dynamics of the shopkeepers' organisation was manipulated by the threat of a large organisation wanting to build a supermarket in their town which would take away their trade.

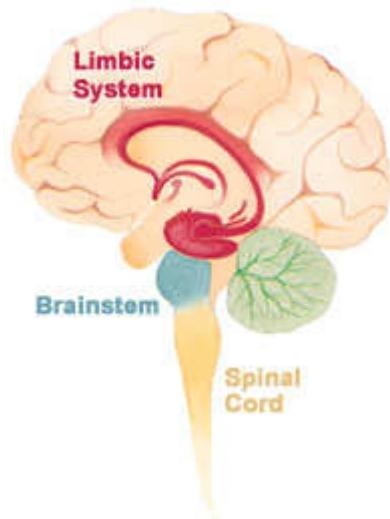
Researchers doing what they want has also led to a number of bizarre experiments. Landis (1924; quoted in

Boese 2007) was interested in the relationship between facial expressions and emotions. He studied the facial expression in response to different stimuli like music, pictures, and smells. The final part of the experiment involved asking the participants to decapitate a live white rat. Around two-thirds of the participants obeyed, but for those who did not, the experimenter did the decapitation in front of the participants. Ultimately, Landis "was never able to find a single, characteristic facial expression that people adopt while decapitating a rat" (Boese 2007 p51).

4.2. ELECTRICAL STIMULATION OF THE BRAIN (ESB)

Doctors at Tulane University School of Medicine in New Orleans, Louisiana were involved in ESB with humans. The programme began in 1950, and nearly one hundred individuals with various mental disorders received the treatment over twenty years (Baumeister 2000). The first cases were reported publicly in Heath (1954).

ESB was seen initially as a treatment for schizophrenia. It should be noted that drug treatment was not available until later in the 1950s, and the treatments used for schizophrenia were of limited use. The rationale was that painful memories from childhood produced reduced cortical activity, and the symptoms seen in schizophrenia. ESB would restore the "normal" balance. The septal region (part of the limbic system)(figure 4.1) was the main focus (Baumeister 2000).



(Source: US Federal Government; in public domain)

Figure 4.1 - The limbic system in the human brain.

Surgical techniques were limited in the 1950s, and placing electrodes deep in the brain was not

straightforward. There were problems admitted by Dr. Robert Heath, head of the programme (Baumeister 2000):

- Electrode "placement was highly inaccurate";
- Electrodes accidentally moved when closing the skull;
- Incision caused "some brain damage";
- Incision into the brain allowed "a pathway for infection";
- Of the first 19 patients, problems included four had seizures, six infections, and two deaths from the infections;
- The amount of electrical stimulation to the brain was decided upon by hit and miss. In fact, there was concern that too strong a stimulation could cause brain damage.

Later cases of ESB at Tulane put electrodes into other brain areas. Some areas were found to produce feelings of pleasure and others the complete opposite. Patients were allowed to stimulate themselves (ICSS - intra-cranial self-stimulation), and it was used as part of operant conditioning programmes (Bishop et al 1964). The idea of ESB and pleasure centres of the brain was developed by work with animals (Olds and Milner 1954).

In the early 1970s, ESB was tried as a "cure" for homosexuality. Moan and Heath (1972) reported the case of a twenty-four year old homosexual man who had ESB to different areas. Feeling that the treatment was a success, the researchers tested it by hiring a female prostitute for the patient: "The laboratory was modified to afford privacy and the subject's electrodes were connected to electrical equipment via an extended cable to enable greater mobility. Before introducing the prostitute to the subject, pleasurable brain stimulation was applied for several minutes to the subject's septal area" (Baumeister 2000 p272). In other words, the patient had sexual intercourse with the prostitute while attached to the ESB machine. In the following year, the patient had both homosexual and heterosexual relationships.

This case provoked criticism against the idea of ESB, including Breggin (1972) calling it a "crime against humanity". Up to that point, there had only been a limited amount of criticism about the ESB programme.

Baumeister (2000) was critical of the whole programme as violating the "core ethics of medicine - that physicians should act for the benefit of the

patient. There was no sound theoretic or empirical rationale to support electrical stimulation of the septal area as a treatment for schizophrenia" (pp273-274). The Tulane staff were aware of this, and justified their programme because their patients were "hopeless" (Baumeister 2000).

of the original nineteen schizophrenia patients, 68% were reported to have shown improvements in behaviour five months later (Monroe and Heath 1954).

Baumeister (2000) had no doubts that the Tulane studies were "dubious and precarious" by today's or yesterday's standards, and "pernicious to life and dignity".

4.3. MANIPULATING FUTURE GENERATIONS: EUGENICS

Eugenics, because of its association with Nazism in the 1930s and 1940s, haunts science including psychology. But in the late nineteenth and early twentieth centuries, the ideas of manipulating future generations was taken seriously through policies like selective breeding (of "good quality" genes) or sterilisation (of "poor quality" adults). Non-voluntary sterilisation programmes were common in many Western countries in the early twentieth century, including the first such in Indiana in the USA in 1907 (Tannsjo 2006).

The Eugenics Society, formed in the late nineteenth century, defined eugenics as "the study of the agencies under social control that improve or impair the racial qualities of future generations either physically or mentally" (Richards 2004). Influenced by Darwin's emerging ideas on evolution, the concern over the inheritance of good and bad traits³ was a topic for Victorian intellectuals, most prominently Francis Galton who coined the phrase "eugenics" in 1883 (Richards 2004).

Selective breeding of animals had proved successful, so why not with humans? One place that tried such an "experiment" was Oneida⁴, a New York state Christian utopian community, between 1868 and 1880. Fifty-eight children were born under the "stirpiculture" (selective breeding) system. They were deemed to be superior in intelligence among other characteristics by contemporary studies (eg: McGee 1891), and the results were reported at the Second International Congress of Eugenics in 1921⁵.

³ Hereditarian - belief that the primary influence on human characteristics is heredity (Richards 2004).

⁴ Details at <http://www.oneida.com>.

⁵ The report "seems to have fallen flat". This may be partly because the Oneida community practised

(Richards 2004). Stirpiculture aimed to spiritually perfect humanity and it encouraged "mating between near relatives".

McGee (1891) was so impressed by the children that she concluded that: "Our race would doubtless be greatly benefited by more attention to the laws of breeding" (quoted in Richards 2004). However, the members of the Oneida community tended to be from "high educational and material standing", so it is not surprising if the children did well irrelevant of the selective breeding idea.

The extremes of eugenics as in the Nazi concepts of racial purity have had supporters among scientists including Konrad Lorenz, best known for his work on imprinting (Eisenberg 2005). Benes (2005) offered a sad defence of such views: "...having the capability of thinking logically as a scientist does not necessarily ensure that one will arrive at moral conclusions... It is a sad fact that being a scientist, even a Nobel laureate like Lorenz, does not ensure that logic will prevail over prejudice" (p1760).

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a form of "free love" while the mainstream eugenics movement was very conventional in such matters (Richards 2004).

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5. ETHICS OF STANFORD PRISON SIMULATION

A piece of research that received a lot of attention in terms of research ethics is the Stanford Prison Simulation (SPS)(or Stanford Prison Experiment; SPE)(Haney et al 1973). Here students acted out prisoners or prison officers in a mock jail. It was stopped after six days because of the "brutality" of the prison guards.

For example, prisoners were forced to clean the toilets with their bare hands; they were sprayed with fire extinguishers; they were made to do "push-ups" with guards stepping on them.

Zimbardo et al (2000) asked and answered the question: "Was the SPE study unethical? No and Yes. No, because it followed the guidelines of the Human Subjects Research Review Board that reviewed it and approved it.. Yes, it was unethical because people suffered and others were allowed to inflict pain and humiliation on their fellows over an extended period of time" (p211).

The students had agreed to take part (informed consent), and they knew that the research was being filmed. The "prisoners" knew they would be locked up for 14 days (no deception). The only deception was the local police "arresting" the "prisoners" in their homes. There was a full debriefing of the participants and long term follow-up to check for ill effects. Obviously the "prisoners" had no right to withdraw.

Though the research was stopped earlier than planned, it could be argued that the research should have stopped even earlier. The evidence of mistreatment by the prison officers was there from the first days.

Zimbardo admitted on the BBC programme, "Five Steps to Tyranny" (2000), that he was caught up in the roles as the "prison supervisor", and the bizarre behaviour seemed normal. Only an outsider to the research realised the human rights abuses, and thus the simulation stopped (Moxon et al 2003).

While Zimbardo et al (2000) reflected nearly thirty years later that: "We should have terminated it as soon as the first prisoner suffered a severe stress disorder on Day 2. One reason we did not was because of the conflicts created by my dual roles as principal investigator, thus guardian of the research ethics of the experiment, and as prison superintendent, thus eager to maintain the integrity of my prison" (pp211-212).

Table 5.1 summarises the key ethical issues and the SPS.

ETHICAL ISSUES	COMMENT
Informed consent	Yes. It is simulation study not an experiment.
Deception	Only in being arrested by police to bring to Stanford University.
Debriefing	Fully.
Right to withdraw	Limited for "prisoners", though one "prisoner" was replaced by another after study had started. "Prisoner" 8612 had an extreme stress reaction and was released
Stress	Considerable for "prisoners". Should have

Table 5.1 - Key ethical issues and the SPS.

Savin (1973) has been most critical of the research, suggesting that it aided the careers of the experimenters: "in pursuit of their own academic interests and professional advancement, deceive, humiliate and otherwise mistreat their students" (p149).

Of the three experimenters, Philip Zimbardo has become the most famous, and much of that fame comes from this research. Zimbardo (1973) replied to the criticism of Savin by emphasising the importance of the findings: "a great many prisoners, former inmates, legislators, criminal lawyers and parole officers have gone on record endorsing the findings and implications of our study" (p250).

And Zimbardo et al (2000) added: "The study has become a model of the 'power of the situation' in textbooks and in the public mind. Along with Milgram's obedience studies, the SPE has challenged people's views that behaviour is primarily under the influence of dispositional factors, which is the view promoted by much of psychology, psychiatry, religion, and law" (p212).

McDermott (1993) argued that the question has now changed from "who will mistreat others?" to "what are the circumstances under which anyone would behave in this uncharacteristic way?". The question can be asked as to whether the same ethical debate would have arisen if the prison officers had not mistreated the prisoners.

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6. TO TELL OR NOT TO TELL PARTICIPANTS: THE USE OF COMPLICATED SCENARIOS IN EXPERIMENTS

- 6.1. Introduction
- 6.2. Festinger and Carlsmith (1959)
- 6.3. References

6.1. INTRODUCTION

Deception of participants does not just involve the information they are not told, but it includes the false scenario that is created around the experiment. Many classic social psychology experiments used detailed cover stories for their research, including extensive scripts. The aim was to produce a realism in the experiment, which both advantages and disadvantages (table 6.1).

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none">1. Make the laboratory study as realistic as possible.2. To stop participants from altering their behaviour to please the experimenter.3. Gives the experimenter control and standardisation of procedure.4. Allows complex procedures with different levels (eg: a story within a story).5. When used with confederates, experimenters are able to control the experimental situation in even more detail.6. Shows the creativity of researchers in designing the experiment.7. More interesting for participants than straightforward procedure.	<ul style="list-style-type: none">1. Involves high levels of deception of participants.2. Can involve manipulating participants' emotions.3. A laboratory experiment will never be the same as a field experiment in terms of ecological validity.4. Script like a play with the experimenter having to act the part with appropriate facial expressions etc.5. More complex scripts increase chance of change in procedure between participants (eg: experimenter or confederate forget line).6. The use of confederates adds another level of deception.7. Regular participants will not believe anything they are told, or that happens during the

Table 6.1 - Advantages and disadvantages of detailed cover stories in laboratory experiments.

6.2. FESTINGER AND CARLSMITH (1959)

Festinger and Carlsmith (1959) were interested in changes in attitudes and behaviour, as predicted by the theory of cognitive dissonance (Festinger 1957)⁶, in a situation of forced compliance. So they set up a scenario where participants had to perform a boring task, and then tell another person how interesting the task was. Would such participants change their attitude towards the task?

After the participant had performed the boring task for some time, the experimenter had to create an excuse to get them to tell another person about the task. (table 6.2).

The participants who were paid \$1 had a greater attitude change in favour of the task as interesting than those participants paid \$20⁷.

The *E* continued:

Is that fairly clear how it is set up and what we're trying to do? [Pause]. Now, I also have a sort of strange thing to ask you. The thing is this [Long pause, some confusion and uncertainty in the following, with a degree of embarrassment on the part of the *E*. The mariner of the *E* contrasted strongly with the preceding unhesitant and assured false explanation of the experiment. The point was to make it seem to the *S* that this was the first time *E* had done this and that he felt unsure of himself]. The fellow who normally does this for us couldn't do it today - he just phoned in, and something or other came up for him - so we've been looking around for someone that we could hire to do it for us. You see, we've got another subject waiting [looks at watch] who is supposed to be in that other condition. Now Professor -----, who is in charge of this experiment, suggested that perhaps we could take a chance on your doing it for us. I'll tell you what we had in mind: the thing is, if you could do it for us now, then of course you would know how to do it, and if something like this should ever come up again, that is, the regular fellow couldn't make it, and we had a subject scheduled, it would be very reassuring to us to know that we had somebody else we could call on who knew how to do it. So, if you would be willing to do this for us, we'd like to hire you to do it now and then be on call in the future, if something like this should ever happen again. We can pay you a dollar (twenty dollars) for doing this for us that

⁶ "If a person holds two cognitions that are inconsistent with one another, he will experience the pressure of an aversive motivational state called cognitive dissonance, a pressure which he will seek to remove, among other ways, by altering one of the two "dissonant" cognitions" (Bem 1967 p183).

⁷ "Dissonance theory interprets these findings by noting that all Ss initially hold the cognition that the tasks are dull and boring. In addition, however, the experimental Ss have the cognition that they have expressed favourable attitudes toward the tasks to a fellow student. These two cognitions are dissonant for Ss in the \$1 condition because their overt behaviour does not 'follow from' their cognition about the task, nor does it follow from the small compensation they are receiving. To reduce the resulting dissonance pressure, they change their cognition about the task so that it is consistent with their overt behaviour: they become more favourable toward the tasks. The Ss in the \$20 condition, however, experience little or no dissonance because engaging in such behaviour 'follows from' the large compensation they are receiving" (Bem 1967 pp187-188).

is, for doing it now and then being on call. Do you think you could do that for us? (Festinger and Carlsmith 1959 p205).

Table 6.2 - Key part of script used in procedure on Festinger and Carlsmith (1959) experiment.

The deception involved in this experiment did not put the participants at risk, but it manipulated their emotions in a way that is often overlooked. They could have left the experiment confused about their emotions as well as feeling humiliated. A basic debriefing after the experiment might not resolve these concerns.

An experiment by Ring et al (1970) has questioned the effectiveness of general debriefings. Fifty-seven undergraduates were used in an obedience experiment that involved making a loud noise in a victim's ear, and afterwards were given one of three debriefings. One group were not debriefed at all, the second group were given the traditional factual debriefing, and the last group received a traditional factual debriefing and explanations for their obedience behaviour. The first two groups were equally upset by the experiment when interviewed later, and 70% of them were suspicious about other experiments.

Thus a simple factual debriefing may not be enough when the participants have been involved in a very emotionally upsetting experiment or where they have behaved unexpectedly for themselves.

Bem (1967) copied the Festinger and Carlsmith experiment but gave the participants more information. His participants listened to a tape recording of an individual, having done the boring task, trying to convince another person that the task was interesting. The participants were asked to rate the attitude change of the person on the tape, and similar results to those of Festinger and Carlsmith were found.

However, this research is nearer to a role-playing simulation study than to the original experiment, and many psychologists would not accept the methodology as useful. Whatever the ethical concerns about the psychology experiment, the laboratory experiment, in particular, gives researchers control and the ability to isolate cause and effect which is very attractive.

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7. DID AN UNETHICAL PSYCHOLOGY EXPERIMENT CAUSE THE UNABOMBER?

There are many studies in the history of psychology that are now seen as ethically unacceptable. One set of studies by Henry Murray (1962) at Harvard University gained even more notoriety because Ted Kaczynski (later the "Unabomber")⁸ was one of the participants (Chase 2000a).

Murray's research on twenty-two undergraduates aimed to measure reactions under stress. The stress was produced by a scenario similar to intensive interrogation with "vehement, sweeping, and personally abusive" attacks on individuals' self-esteem and world-views: "The intention was to catch them by surprise, to deceive them, and to brutalise them" (Chase 2000a).

The students believed they would debate their philosophy of life with another student, when, in fact, they were confronted by an older confederate. This took place in a "brilliantly lighted room" with a one-way mirror and a hidden camera, and with electrodes attached to measure heart and respiratory rates.

Robinson (1992) summarised the scenario:

"As instructed, the unwitting subject attempted to represent and to defend his personal philosophy of life. Invariably, however, he was frustrated, and finally brought to expressions of real anger, by the withering assault of his older, more sophisticated opponent ... while fluctuations in the subject's pulse and respiration were measured."

Not surprisingly, most participants found this highly unpleasant, even traumatic. "We were led into the room with bright lights, very bright," one of them, code-named Cringle, recalled afterward. "[I] had a sensation somewhat akin to someone being strapped on the electric chair with these electrodes ... I really started getting hit real hard ... Wham, wham, wham! And me get ting hotter and more irritated and my heartbeat going up ... and sweating terribly ..." (quoted in Chase 2000a)

The "volunteers" were recruited by answering yes to the question: "Would you be willing to contribute to the solution of certain psychological problems (parts of an ongoing programme of research in the development of personality), by serving as a subject in a series of

⁸ Over seventeen years, between 26th May 1978 and 24th April 1995, 16 postal bombs killed three people and injured 23 in the USA. He also had "The Manifesto" called "Industrial Society and Its Future" published in "The Washington Post" in 1995.

experiments or taking a number of tests (average about two hours a week) through the academic year (at the current College rate per hour)?" (Chase 2000a). It was never made clear what the "certain psychological problems" were.

This research was similar to work on resisting interrogation that Murray was involved in after the Second World War on behalf of the US Government. The procedure was thus:

The candidate immediately went downstairs to the basement room. A voice from within commanded him to enter, and on complying he found himself facing a spotlight strong enough to blind him for a moment. The room was otherwise dark. Behind the spotlight sat a scarcely discernible board of inquisitors.... The interrogator gruffly ordered the candidate to sit down. When he did so, he discovered that the chair in which he sat was so arranged that the full strength of the beam was focused directly on his face....

At first the questions were asked in a quiet, sympathetic, conciliatory manner, to invite confidence.... After a few minutes, however, the examiner worked up to a crescendo in a dramatic fashion.... When an inconsistency appeared, he raised his voice and lashed out at the candidate, often with sharp sarcasm. He might even roar, "You're a liar." (Murray 1948 quoted in Chase 2000b).

The participants were affected by the experiment and even twenty-five years later, they recalled the unpleasantness of it. The participant, "Cringle", remembered "anger and embarrassment", "Drill" "unabating rage", and Locust" was "shocked by the severity of the attack" (Chase 2000a).

In terms of the effect on Ted Kaczynski (figure 7.1), Chase (2000a) summed up:

We don't know what effect this experiment may have had on Kaczynski. I did not have access to his records, and therefore cannot attest to his degree of alienation then. Kaczynski must certainly have been among the most vulnerable of Murray's experimental subjects - a point that the researchers seem to have missed. He was among the youngest and the poorest of the group. He may have come from a dysfunctional home...

It was the confluence of two streams of development that transformed Kaczynski into the Unabomber. One stream was personal, fed by his anger toward his family and those who he felt had slighted or hurt him, in high school and college. The other

derived from his philosophical critique of society and its institutions, and reflected the culture of despair he encountered at Harvard and later. The Murray experiment, containing both psychological and philosophical components, may well have fed both streams.



(Source: US Federal Government; in public domain)

Figure 7.1 - Ted Kaczynski in 1996.

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8. TELLING PARTICIPANTS UNPLEASANT FALSE INFORMATION: THE "ORDINARINESS OF EXPLOITATION" IN PSYCHOLOGY EXPERIMENTS - BRAMEL (1962)

- 8.1. Introduction
- 8.2. Procedure
- 8.3. Ethical issues
- 8.4. References
- 8.5. Bramel (1963)

8.1. INTRODUCTION

Bramel (1962) was interested in how individuals deal with unpleasant information about themselves, particularly in relation to how they see themselves. For example, an individual who sees themselves as wholly good, when told about bad characteristics will experience conflict (dissonance). To avoid this anxiety, they employ defensive measures, in psychoanalytic terms, like projection. This is the attribution of the bad characteristic to another person. Individuals who sees themselves as wholly bad will not experience dissonance when they learn about their bad characteristics, and so no project will occur (figure 8.1).

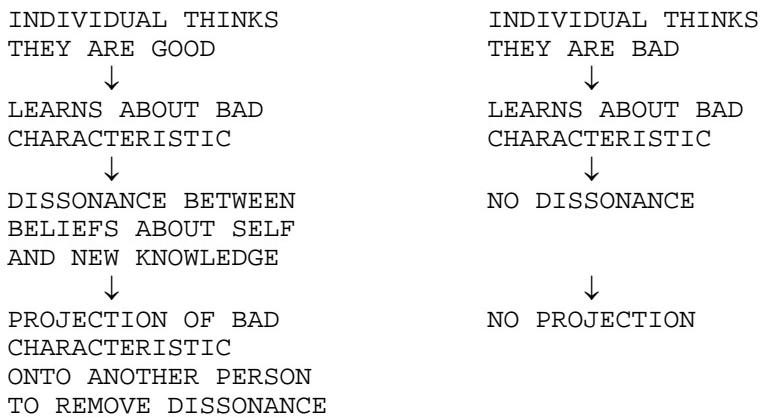


Figure 8.1 - Mechanism of dissonance and projection.

Bramel wanted to test this idea in a laboratory experiment by manipulating the participants' behaviour. Feeling good or bad about themselves was created by changing self-esteem experimentally, and the unpleasant characteristic was homosexuality for male students. In 1960s USA, where and when the experiment was done, homosexuality was viewed very negatively. To tell a man

he was "secretly" a homosexual would have produced dissonance.

8.2. PROCEDURE

Initially, the eighty-four male psychology undergraduates, who were the participants, were asked to fill out a number of personality questionnaires. This created the impression that subsequent information about their personality was accurate. In reality, the experimenter randomly allocated participants to a group having their self-esteem raised by positive feedback (Favourable condition) or their self-esteem lowered (Unfavourable condition). The personality questionnaires covered creativity, hostility, egocentricity, and overall maturity.

Then two participants were put together and asked to rate the personality of each other. The participants did not know that one of them had just had positive feedback on their personality and the other negative.

Next the two participants were attached by two electrodes to galvanometers which were said to measure arousal on the dial in front of them. Each participant could only see his dial. The experimenter explained that this part of the experiment was investigating unconscious homosexual arousal. Fifteen slides of men in states of undress were shown.

Participants were asked to write down their galvanometer reading for each photograph, and to guess the reading of the other participant. The galvanometer readings were controlled by the experimenter and were used to create the impression homosexual arousal to the photographs. "As a precaution against excessive threat, they were told that persons with very strong homosexual tendencies would consistently 'go off the scale'" (Bramel 1962 p123).

The instructions given emphasised the accuracy of the galvanometer readings, which limited the participants' option of denial through untrustworthy equipment. It was hoped that the scenario would induce defensive projection. It was predicted that participants in the Favourable condition, with a high self-esteem, dissonance would be produced with the "revelation" of their "potential homosexuality" leading to greater projection of the unpleasant trait (homosexuality) onto another person. So Favourable condition participants should rate the galvanometer readings of the other participant as higher than Unfavourable condition participants who will not feel dissonance.

Bramel converted the results into a "P score" - the

estimate of the other's galvanometer reading minus the reading for themselves (as determined by the experimenter). A positive score would be rating the other participant as having a higher level of homosexual arousal than the self (ie: projection).

Full debriefing took place immediately after the experiment:

A considerable amount of time at the end of the experiment was allocated to explaining the true nature of the study and demonstrating in detail that the personality reports and the apparatus were incapable of giving a correct evaluation of a person. The expression of relief which often followed the unveiling of the deceptions indicated that the manipulations had been effective. The necessity for the deceptions used in the experimental analysis of such delicate processes was carefully explained, and all questions were answered. Not until the subjects seemed quite restored and satisfied was the session ended. All available evidence indicates that the subjects considered the experiment interesting and worthy of their participation (Bramel 1962 p124).

Table 8.1 summarises the key points of the experiment.

Independent variable (IV) - High or low self-esteem (Favourable or Unfavourable condition)

Dependent variable (DV) - P score

Procedure:

1. Filled out personality questionnaires.
2. Given false information about personality to induce high or low self-esteem (manipulation of IV).
3. Paired with another participant to rate other's personality.
4. Attached to galvanometer and shown photographs of men.
5. Asked to guess galvanometer reading of other participant (DV measure).

Table 8.1 - Key aspects of the experiment by Bramel (1962).

The P scores were calculated adjusting for prior ratings of masculinity before the photographs were shown. The mean for the Favourable condition was +4.65 and -4.76 for the Unfavourable condition. This meant that in the Favourable condition, participants estimated that the other person's galvanometer reading was higher than their own, and this is taken as projection of homosexuality onto the other person. In the Unfavourable condition,

estimates for the other person were lower than their own reading. Thus no projection was seen as taking place.

8.3. ETHICAL ISSUES

This study can be seen as unethical in a number of key ways.

1. Informed consent - This was not given for the actual experiment. Participants agreed to take part in a study of personality.

2. Deception - Participants were deceived in a number of ways including the real purpose of the experiment, and the galvanometer readings. The latter can be seen as "extreme deception" because of the important consequences of the information falsely given. To indicate that participants may be homosexual was deliberately chosen because of the negative attitudes towards it for men in the experiment at the time. It is different to manipulating other personality traits like introversion/extraversion or the level of intelligence.

3. Debriefing - Though there was an immediate debriefing of the participants, individuals may still have left the laboratory believing that they had had unconscious homosexual arousal. This is because of the perseverance effect, which is the tendency to believe the first information despite later contradictions (Brewer 2001).

4. Right to non-participation - It is quite probable that the psychology students did not have the complete right to not participate because, at the time, it was common to coerce "volunteering" for experiments with course credits. Menges (1973) estimated that 40% of participants were from "course requirements" in nearly 1000 studies published before 1972.

5. Distress to participants - The manipulation of self-esteem and use of false feedback may not seem that distressing for participants, but it is the fact that it does not seem as extreme as Milgram's experiments or the Stanford Prison Simulation, for example, that hides the consequences. Individuals may not suffer a major psychological problem after the experiment, but, in a small way, it has changed them.

Some of the male participants will be aware that

they could be homosexual, and this will influence their behaviour in different ways. Aronson (1999) asserted that the "experimenter must take steps to ensure that the participants leave the experimental situation in a frame of mind that is at least as sound as it was when they entered".

This experiment is typical of the "ordinariness of exploitation" that took place in psychology research in the past, and still does, to some extent, today.

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8.5. APPENDIX: BRAMEL (1963)

Bramel (1963) built upon the previous research by again manipulating self-esteem and suggesting "homosexual motivation" among 97 male students at Stanford University in California. The procedure was similar to Bramel (1962) in manipulating self-esteem through apparent results of personality questionnaires, and the galvanometer was used to rate "unconscious homosexual arousal".

Participants then had to rate a speaker for personality traits, including homosexuality, under the following pretext:

It was explained that clinical psychologists were having difficulty training people to interpret Thematic Apperception Test (TAT) materials, and that study of the spontaneous intuitive judgments of TAT stories by untrained persons might yield valuable clues to the problem. To this end, the subject was to be given an opportunity to listen to a tape recording of a person telling stories to a set of TAT pictures. His task would be to try to form an impression of the personality of the person speaking...

While listening to the recording, the subject looked at the card being described. Immediately after the 7-minute tape had ended, he was given a questionnaire to fill out, containing measures

... of the impression he had formed of the stimulus person, his rating of his own degree of homosexuality, and other related questions (pp319-320).

The speaker was introduced as a member of the same group (student) or another group (criminal). The focus of the research was upon whether defensive projection would take place with the same or a different group member.

Individuals with dissonance (high self-esteem conflicting with homosexual arousal) were more likely to attribute homosexuality to the "student" speaking on the tape than the "criminal". Why did the projection occur with the ingroup? Bramel (1963) gave this explanation for the results: "if the subject can believe that other students like himself have about the same amount of homosexual motivation as he has, then his position on his subjective scale is not extreme. The cognition that one is 'average' in homosexuality probably does not strongly negate a moderately favourable level of self-esteem, and is certainly less dissonant than the cognition that one is more homosexual than others in the comparison group" (p324).

9. THREE IMPLICATIONS OF THE USE OF DECEPTION IN SOCIAL PSYCHOLOGY EXPERIMENTS

Menges (1973) reviewed around 1000 studies published in six main American psychological journals up to the 1970s and found that nearly 90% had used some form of deception; ie: either incomplete or inaccurate information given to the participants (table 9.1). Only 3% had given complete information about the independent variable and 22% about the dependent variable.

TYPE OF DECEPTION	% OF STUDIES USING DECEPTION
Purpose of study	10.8
Participant's own behaviour	30.8
Information about others	34.6
Instruments	23.8

(After Menges 1973)

Table 9.1 - Types of deception used in American psychological studies.

Kelman (1967) addressed the use of deception in social psychology research, and began by admitting that: "The pervasiveness of the problem becomes even more apparent when we consider that deception is built into most of our measurement devices, since it is important to keep the respondent unaware of the personality or attitude dimension that we wish to explore" (p1).

Not only was deception commonplace in social psychology experiments at the time of Kelman writing, but he was particularly concerned about second-order deception as well. This involved the participants believing that they are the experimenter or the experimenter's accomplice. The worry is that:

Such a procedure undermines the relationship between experimenter and subject even further than simple misinformation about the purposes of the experiment; deception does not merely take place *within* the experiment, but encompasses the whole definition of the relationship between the parties involved. Deception that takes place while the person is within the role of subject for which he has contracted can, to some degree, be isolated, but deception about the very nature of the contract itself is more likely to suffuse the experimenter-subject relationship as a whole and to remove the possibility of mutual trust (p2).

Kelman feared that: "I sometimes feel that we are training a generation of students who do not know that there is any other way of doing experiments in our field- who feel that deception is as much de rigueur as significance at the .05 level" (p3). For him, there were implications to the common use of deception in experiments.

1. Ethical implications - Participants are often told false information about themselves, and Kelman asked: "Do we have a right, however, to add to life's little anxieties and to risk the possibility of more extensive anxiety purely for the purposes of our experiments, particularly since deception deprives the subject of the opportunity to choose whether or not he wishes to expose himself to the risks that might be entailed?" (pp3-4).

2. Methodological implications - The common use of deception with the main group of participants studied, college students, will backfire. They will be looking for deception automatically: "They may not know the exact purpose of the particular experiment in which they are participating, but at least they know, typically, that it is not what the experimenter says it is" (p6).

Orne (1962) observed the extent of the problem: "...even if a psychologist is honest with the subject, more often than not he will be distrusted... 'Psychologists always lie!'... This bit of paranoia has some support in reality" (pp778-779; quoted in Kelman 1967 p6). The upshot is that participants do not behave normally in the experiment, and this becomes a confounding variable which limits the trustworthiness of the findings.

3. Implications for the future of social psychology - Kelman noted that: "There is something disturbing about the idea of relying on massive deception as the basis for developing a field of inquiry. Can one really build a discipline on a foundation of such research?" (p7). This goes against the tradition of science to improve humanity.

Deception of participants in social psychology is less common today than when Kelman was writing in the mid-1960s, but it still happens, and Kelman's concerns about it are as valid today.

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